YEIP 93-067 1993

REPORT FOR YUKON MINING INCENTIVES PROGRAM FILE # 93-067

N.T.S. AREAS 105-E-1; 105-E-14; 115-I-2; 115-I-3.

SUBMITTED BY:
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Geologist

Introduction

This report describes the results of a <u>hard rock reconnaissance</u> prospecting program carried out over a widespread area of crown land in three principal locations. They are listed as follows, and for the purposes of this report, will be referred to by their geographical names only:

- 1) Claire Lake Area (105-E-14)
- 2)Loon Lakes Area (105-E-1)
- 3) Victoria Mountain Area (115-I-3 and -4)

Description, Location, and Access of Prospecting Areas

The Claire Lake Area is centred on Claire Lake, approximately 80 miles north of Whitehorse. Loon Lakes Area is situated in the Pelly Mountains, 40 miles north-east of Whitehorse. These first two areas are accessible by float equipped aircraft only. The third area, Victoria Mountain, is accessible by a secondary road from the town of Carmacks, 30 miles to the east.

Claire Lake and Loon Lakes are areas of high relief and low outcrop exposure. Both areas are surrounded by hills in excess of 2000 ft. above the level of the lake. Outcrop is exposed primarily in deeply cut stream channels and also at the tops of the mountains. Both of these factors restricted our prospecting activities, but did not make them impossible.

The third area, Victoria Mountain, had better outcrop exposure and more gentle relief due to the fact that we were able to drive nearly to the top of the Klondike Plateau in our vehicle.

Geology - Claire Lake Area

All terranes accessible by boat or by foot from Claire Lake lie within the Tatchun Belt, a relatively thin (less than 10 miles) unit composed of Jurassic and Upper Triassic sub-aerial volcanic assemblages - primarily intermediate tuffs, agglomerates, and breccias, with some flows, porphyrys and volcanogenic sediments. These are the same rocks which host most of the epithermal precious metal deposits in the intermontane belt.

Observations made during this prospecting program confirm the presence of these rock types (see Claire Lake maps 1,2, and 3 enclosed). Most of the rocks examined were extensively altered mechanically. Fault breccias, mylonites, extensive local block faulting and pervasive carbonate alteration all confirm that Claire Lake and environs lie within a major north-west trending fault zone -- the "Claire Lake Fault".

Geology - Loon Lake Area

The Loon Lakes Area was selected as a prospecting target because it lies in a favourable geological horizon with lots of unstaked land along strike from an excellent known copper-gold showing.

Quoting from Minfile #105-E-003 "Copper mineralization strikes N.020 degrees E., parallel to a major fault (Teslin Suture Zone) that lies 3.2 km. to the east. This trend is slightly oblique to the strike of the host rocks, which consist of highly foliated Late Triassic to Early Jurassic chlorite-serecite-quartz schist and cherty quartzite."

The prospect, shown as staked on map 4, "Loon Lakes", has been extensively drilled and trenched. There also are two adits. Dump material consisting of quartz with chalcopyrite have assayed as high as 44.6 g/ton Au., 144.0 g/ton Ag., and 10% Cu.

Observations made during this prospecting program indicate that regionally the rocks appear to be dacite flows, chlorite schists, limestones (to the south-west), and slates. Mineralization occurs in small gossans in chlorite schists and quartzites.

Geology - Victoria Mountain Area

The Victoria Mountain/Mt. Nansen Area was chosen as a final prospecting area because of its extensive easy accessibility in the form of the secondary road network which extends westward from Carmacks. This area thus became the reconnaissance part of the program, allowing us to familiarize ourselves with a wide variety of Yukon stratigraphy's - primarily within the Yukon Cataclastic Terrane.

Regionally, around Victoria Mt./Mt. Nansen, the rocks are quartz-feldspar porphyrys and felsic volcanic feldspar porphyrys with secondary subvolcanic felsic intrusives. To the east, toward Victoria Creek and Rowlinson Creek (map 5) the rocks grade into granite and dioritic gneiss and then into mature palaeozoic sediments such as sandstones, shales and grey wackes.

The gneiss located east of Victoria Creek (Map 5) became a primary target only after we had done some preliminary prospecting work.

These gneiss are located on ground recently released from staking and located favourably just to the east of the Mt. Nansen Mine - described by Minfile # 115-I-065 as follows: "the mineralized veins are in strong shear zones that cut highly altered Palaeozoic schist and gneiss intruded by dykes and stocks of Lower Cretaceous porphyry." Reserves on the property are estimated at 1,000,000 tons grading 9.4 g/ton Au and 190 g/ton Ag (B.Y.G. Natural Resources Inc. Annual Report, 1989, pg.6)

<u>Mineralization</u>

As a result of this prospecting program, thirty-one rock samples were sent in for analyses for precious and/or base metals. Sample descriptions and assay certificate are enclosed. Of these, only one returned anomalous (L-2) 2282 PPM Cu, 903 ppm Pb. This sample was taken from the Loon Lakes area (map 4) and represents a newly discovered extension of the known mineralized zone for a further 800 metres to the north.

Conclusions

The Claire Lake Area displayed a distinct lack of mineralization. The few sulphides which were found contained no anomalous metal values. This fact, along with difficult topography and a dearth of rock exposure leads me to abandon this area as an exploration target.

The Victoria Mountain area is well mineralized regionally, but is extensively staked. Unstaked ground which we prospected yielded no appreciable mineralization. The area immediately south of Victoria Mountain (map 6) was so barren that no rock samples were assayed.

The Loon Lake area holds merit as a target for follow-up staking and detailed geological mapping. The sample (L-2; 0.25% copper) is highly anomalous and comes from open ground along strike from the zone of mineralization and within the same rock type as the original discovery.

GEOCHEMICAL ANALYSIS CERTIFICATE

Randy Hodgson File # 93-2427 Page 2 5674 Marlatt Ave, Powell River BC VBA 4E7



SAMPLE#	Au* ppb
C-1 C-2 C-3 C-4 C-5	1250- not from Yukon.
C-6 C-7 C-10 C-11 C-12	1 2 1 8 7
C-14 C-15 L-1 L-6 RH-1	3 28 17 7
RH-2 RH-3 RE RH-3 RH-4 RH-5	1 2 1 5 3
RH-8 RH-9 RH-10 RH-11 RH-12	22 2 1 21
STANDARD AU-R	510

AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE. Samples beginning 'RE' are duplicate samples. - SAMPLE TYPE: ROCK

852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6

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GEOCHEMICAL ANALYSIS CERTIFICATE

Randy Hodgson File # 93-2427 Page 1
5674 Marlatt Ave, Powell River BC V8A 4E7

SAMPLE#	Mo ppm		Pb ppm	Zn ppm	• • •	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd	Sb ppm	Bi ppm	V	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	ppm W
C-13 L-2	4	19 2282	15 903	66	.2	11	2		.13 .76	2	<5 <5	<2	3 <2	34	.5	2	<2 13	13 <2		.013	7 <2	33 12	.15	154	.01 <.01	7	.24	.04	.11	<1
L-3 L-4	2	40		66 44 58	.6 .1 <.1	13 18 19	3	193 2 240 3	.78	5	<5 <5	<2 <2 <2	4	32	<.2 .5	<2 <2	2 <2	6	.08	.024	13		.53		.04	5 1	.15 1.11 1.60	.01 .01	.02 .13	2
L-5	2	24	18	29		17	4		.97 .97	6	< 5	<2	11	4	.4	2	₹2	2		.008	10	12			<.01	3	.46	.02	.18	1
L-7 L-8	1 2	30 11	22 <2	104 59	.2 <.1	11 36	5 11	183 2 319 5		7 6	<5 <5	<2 <2	11 13	4 30	<.2 <.2	<2 <2	<2 <2	28 17	1.29	.016 .071	6 53		.51 1.42	43 87	.09		1.47 2.29	.02	.15	1 <1
RE L-8 RH-7	2 <1	12 166	<2 <2	58 30	<.1 .2	37 21	11 30	317 5 906 4		7 30	<5 <5	<2 <2	13 <2	31 45	<.2	<2 <2	2 <2	17 131		.072	54 2	44	1.41	83	.01	4 2	2.30	.01	.17	2
STANDARD C	18	57	37	122	6.7	67	28	1048 3	.96	42	19	7	37	52	18.2	14	21	56	.51	.086	36	56	.90	190	.09	35	.88	.06	. 14	11

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HN03-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL.

ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB

- SAMPLE TYPE: ROCK Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: SEP 13 1993 DATE REPORT MAILED:

:Sept 16/93

SIGNED BY D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

Assay Rock Descriptions

- RH1 Peridotite, incipient serpentines, pyroxenes, carbonate, minor pyrite
- RH2 Felsic porphyry rusty
- RH3 Pale green find grained ryolite feldspar crystal flow minor pyrite
- RH4 Fault breccia quartzite and/or ryolite with chlorite and carbonate
- RH5 Rusty felsic sediment?? chert beds, sperulites?, mylonite?
- RH6 No assay.
- RH7 Pale grey dacite locally 10% py.,cpy?, assay for Au, Ag, Cu.
- RH8 Dark quartz feldspar porphyry with pyroxenes?, 10% py. blebs.
- RH9 Felsic fault breccia chert stockwerke, carbonate, 5% py. mylonitic textures.
- RH10 Gossan in fault zone mylonite rock type unknown.
- RH11 Conglomerate with quartz veins.
- RH12 Gossan py.
- L-1- chlorite schist minor py. south Loon, east side.
- L-2- quartzite 10% cpy.
- L-3- rusty quartz vein.
- L-4- dark quartzite minor py.
- L-5- rusty quartz feldspar porphyry.

- L-6- sediment from creek at Loon summit.
- L-7- rusty quartzite.
- L-8- quartz chlorite pyrite schist.
- C-1- shear in sediments on road into area.
- C-2- sample not from Yukon.
- C-3- rusty sediments.
- C-4- andesite with 10% py. (east side of Loon Lake).
- C-5- soil sample adjacent to gneiss outcropping.
- C-6- gneiss.
- C-7- quartz-vein in gneiss.
- C-11- quartzite with sulfides.
- C-12- quartzites with lots of py.
- C-13- quartz vein in sediments.
- C-14- bedded sulfides in quartzites.
- C-15 quartz porphyry with disseminated pyrite (Mt. Nansen type-sample).

Yukon Energy, Mines & Resources Library

DATE	DU	E
	- <u>-</u> -	

Index for Maps

1) Marie volcanie (a) flow (b) tuff. (c) chlorite schist.

2) chatermediate volcania (a) flow (b) fuff

3) Felsie volcanie (a) flow (b) tuff.

4) Sediments (a) Sandstone
(b) conglomerate
(c) shale
(d) arkose.

5) Intrusive.

Symbols

-RH#'s, L#'s, C#'s -> sample locations

-Q.F.P. - quartz-feldspar porphyry

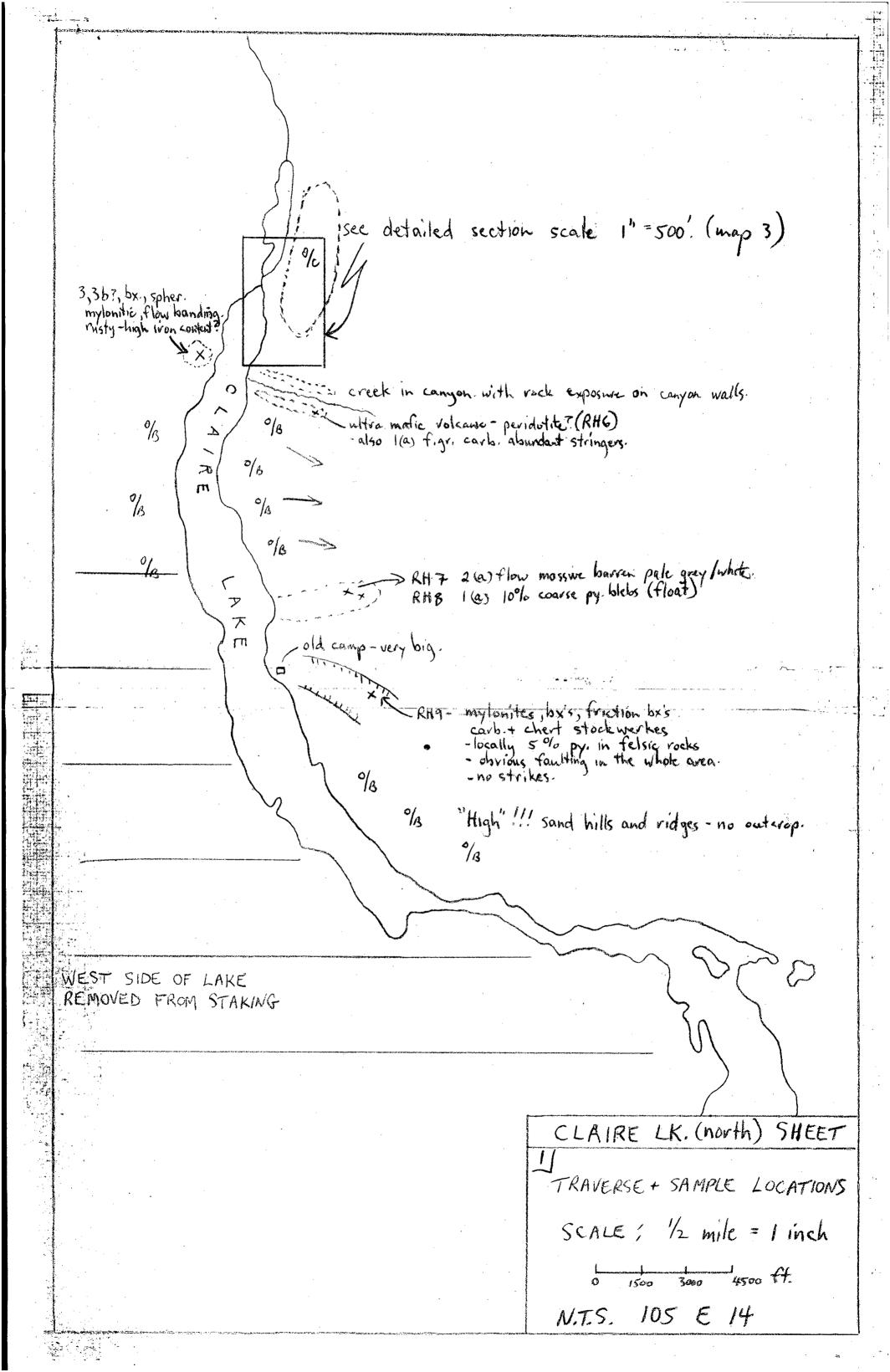
(C) outcrop

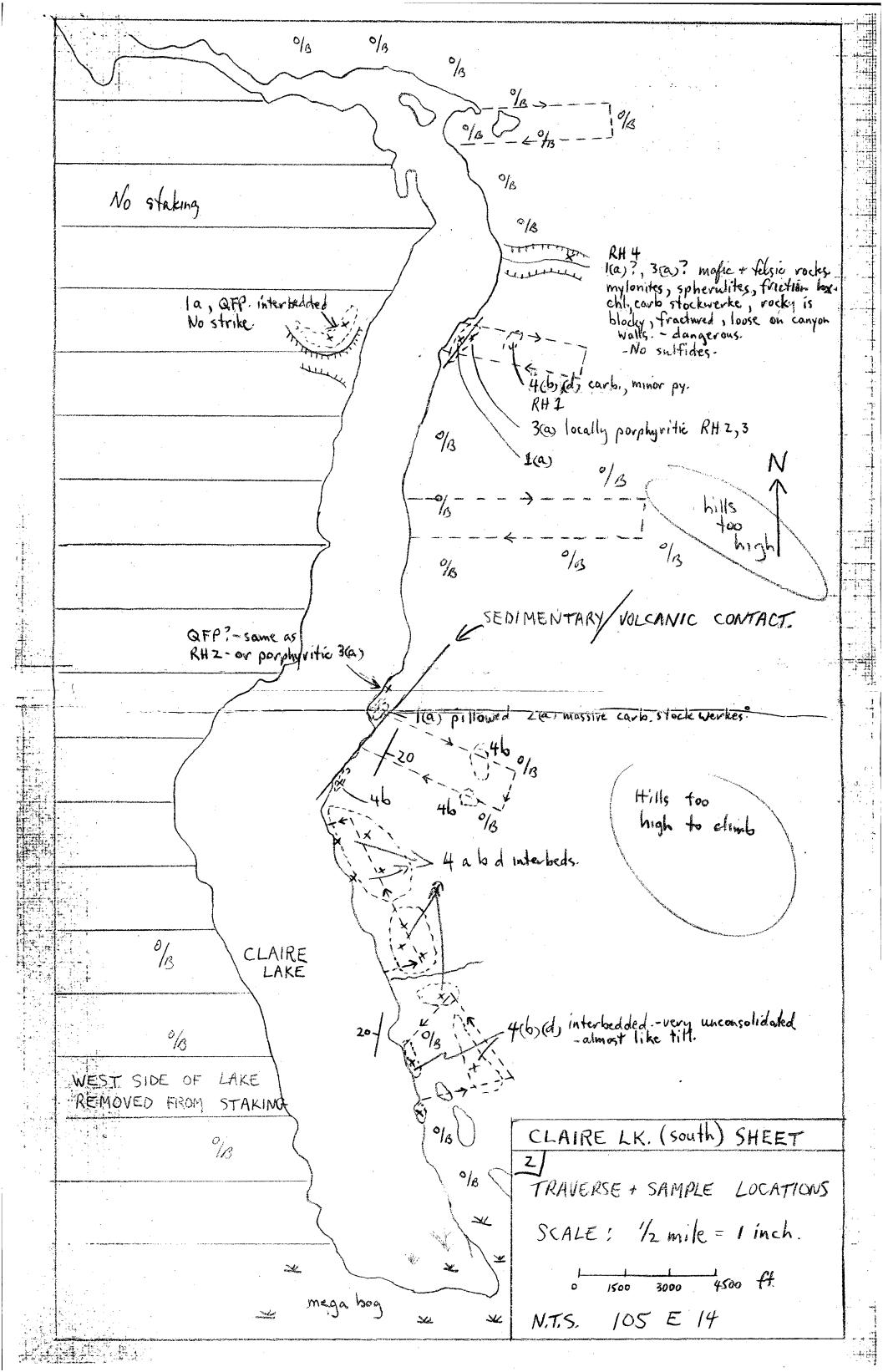
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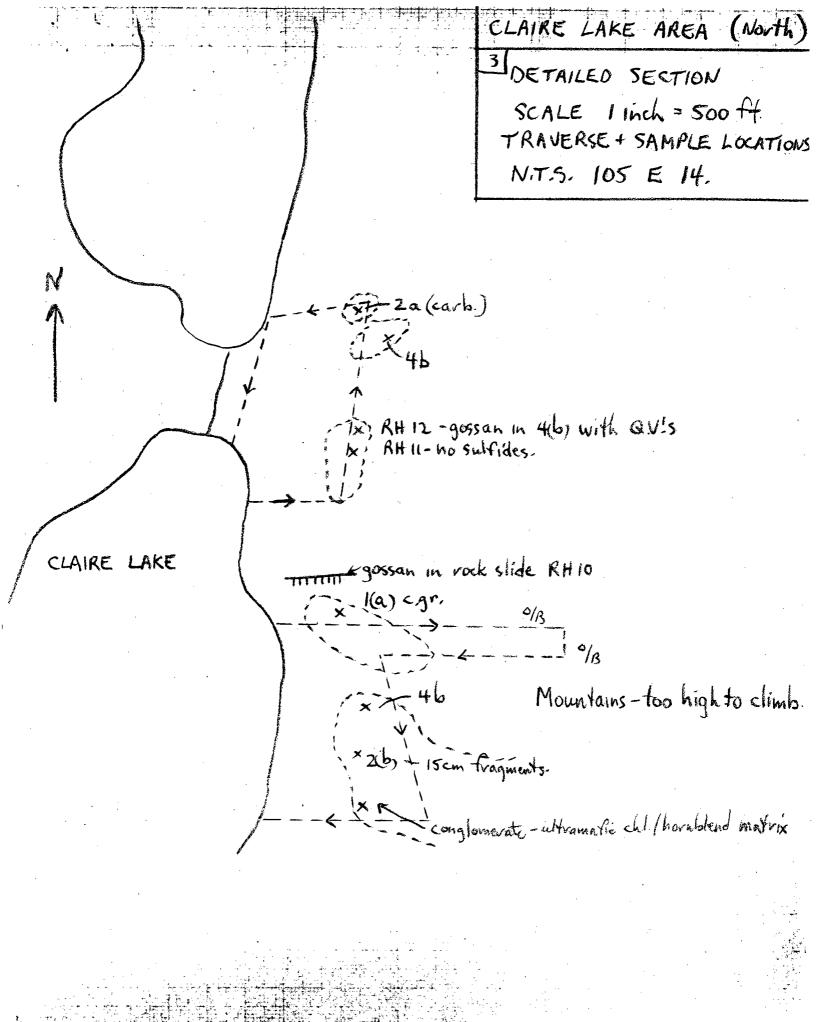
OB overhunden

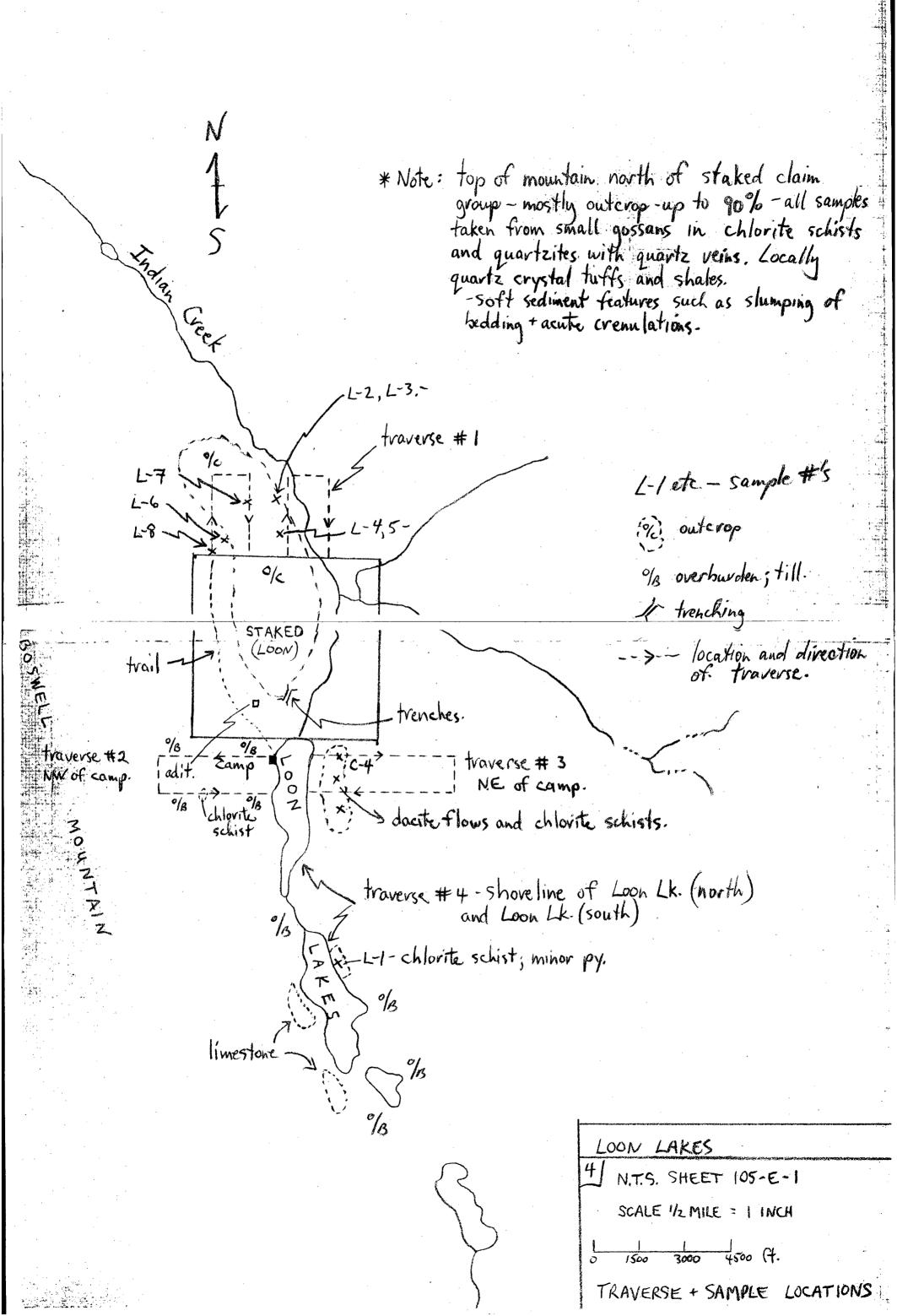
** Swamp

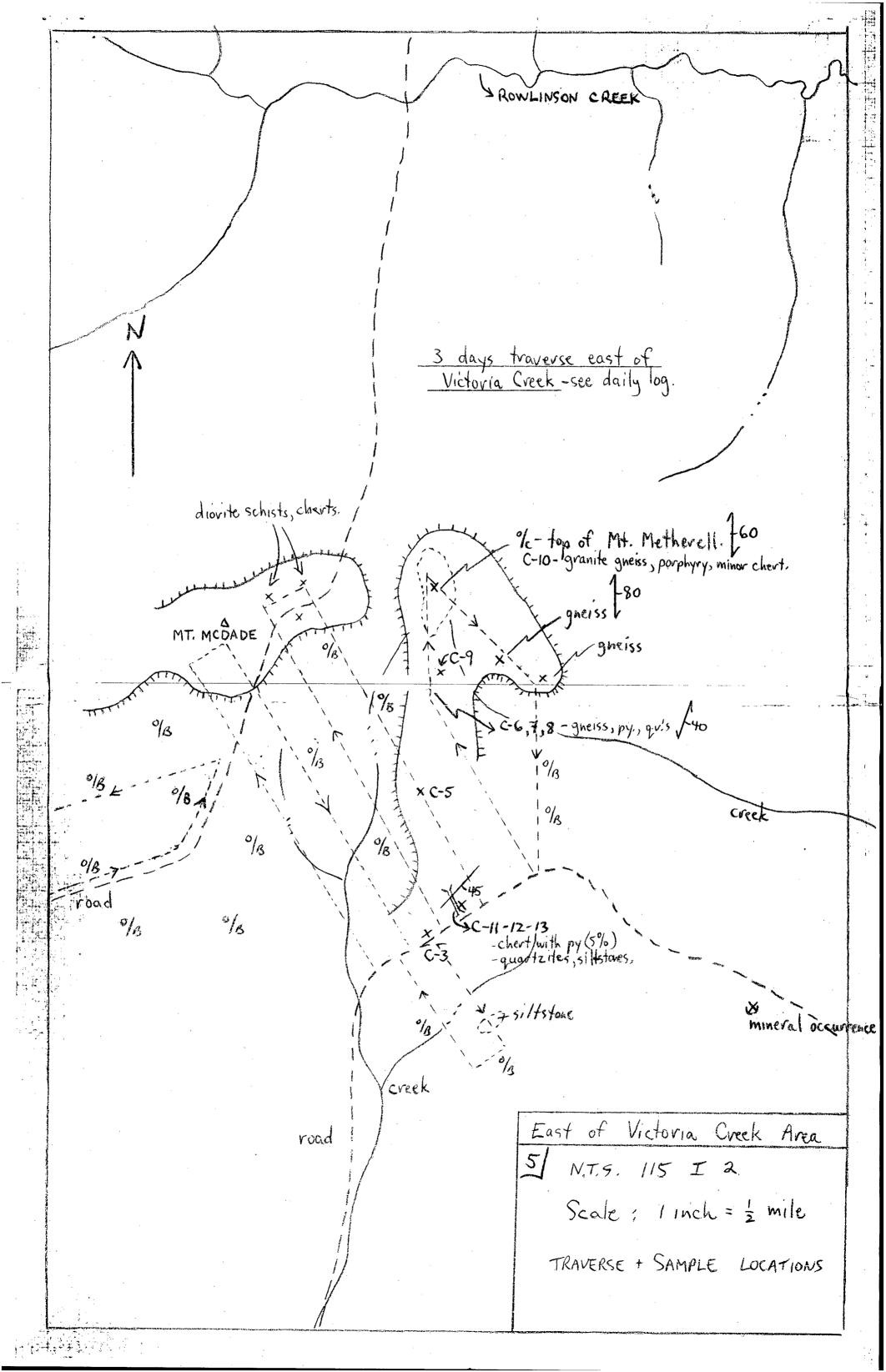
/ 1 strike + dip (bedding, foliation)

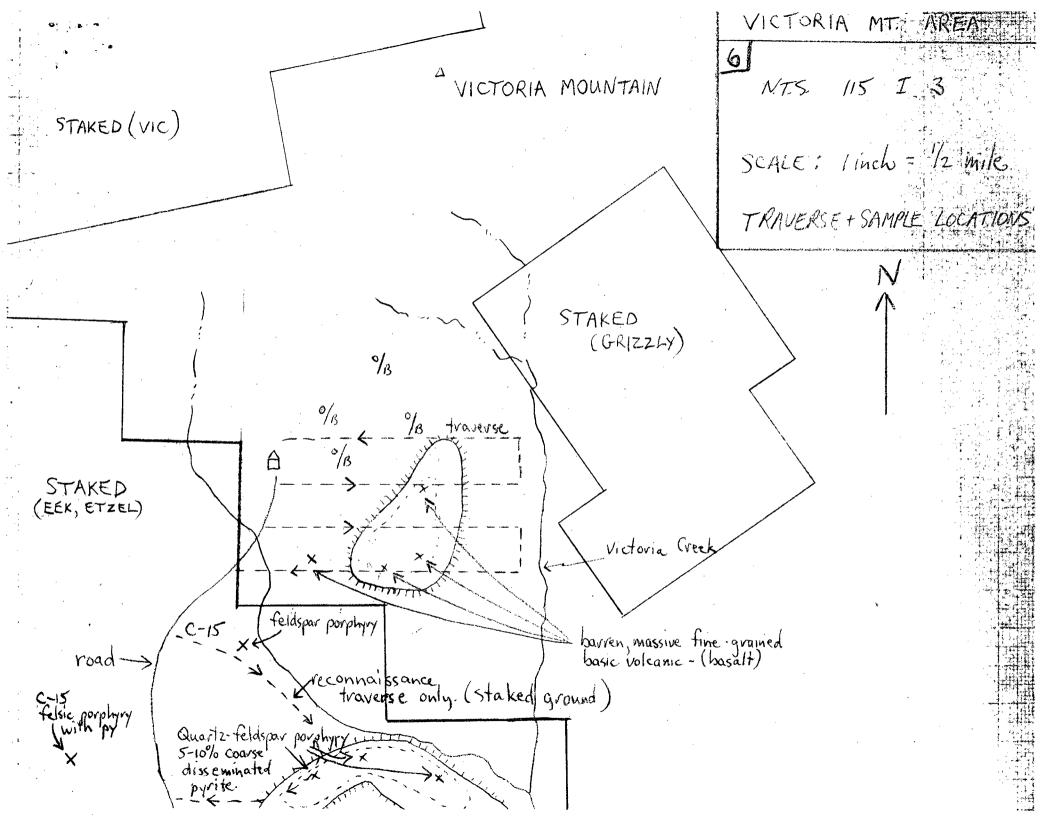












Geology-based on G.S.C. map 1505 A- Tectonic Assemblage of the Condithera

KTO- upper Cretaceous intermediate/felsic flows/tuffs- Sub aerial"

TIT-upper Triassic lower Jupassic basic volcanics, porphyny, sectionent

N.T.S. - Area of concentration 115 I NW Yukon **Canada** 137°00′ McQuesten II5 P SOUTH TANTALUS (Coal) TANTALUS MINE (Coal) TANTALUS BUTTE (Coal) FIVE FINGERS (Coal) CONGLOMERATE BISHI \bigcirc TASLAR WILLIAMS CREEK (Cu-Un) 9. MERRICE (Cu - Vein)
10. BONANZA KING (Cu - Vein) 11. STU (Cu, Au, Ag – Un)
12. MAUD
13. HOOCHEKOO (Cu – Un)
14. VERLENE (Cu – Un) DISTRICT MINING DISTRICT MINING DAWSON 15. LYDEN
16. RENTON
17. TOWHATA (Coal)
18. NEEDLEROCK (Coal)
19. BRADENS CANYON (Cu – Un) QUESNELLIA 20. COIN (Cu - Vein) 21. MINTO (Cu-Un) 22. DEF (Cu – Un)
23. PAL (Cu – Un)
24. ADERA
25. GRENIER (Coal) 26. PELLY (Cu-Un) 27. NIX 28. MINNESOTA 29. DELTA 31. TAD (Pb,Zn,Cu — Un)
32. PHELPS (Cu—Un). 33. TERRA
34. FROG (Ag, Au – Vein)
35. WILCZEK
36. STARBIRD (Cu – Un) MINING WHITEHORSE CISTRICT 37. CASH (Cu, Mo — Ppy)
38. KLAZAN (Cu, Mo — Ppy) 39. COM (Cu - Un) 40. SPOKANE 41. SAMSON 42. REVENUE (Au,Cu-Ppy) 43. COMBO 44. EGG 45. NEWKIRK (Cu, Mo - Un) 46. LIL (Au — Vein) 47. TRITOP YUKON-TANANA 48. EDGAR 49. CARIBOU CREEK (Au-Vein) 50. GRANGER (Au -Vein) 51. CASTLE (Cu — Un)
52. RED FOX (Ag,Pb,Au – Vein)
53. GUDER (Au,Ag — Skn) 54. LAFORMA (Au-Vein) 55. EMMONS HILL (Sb, Au - Vein) 57. GRANITE MOUNTAIN (Cu-Ppy)
58. TINTA HILL (Au, Ag - Vein) 61. OPAL
62. FOSTER (Au—Vein)
63. KINRATISHIN
64. BROWN-McDADE (Au,Ag—Vein)
65. MOUNT NANSEN (Au,Ag—Vein)
66. CYPRUS (Cu, Mo—Ppy) 67. ESANSEE (Ag, Au, Pb - Vein) 68. DIVIDE (Au, Ag - Vein) 69. SCHIST 70. MALONEY (Cu, Mo - Ppy) 71. CHART 73. CHERI STIKINIA(P) 74. COMANCHE (Cu-Un) 75. NORTHAIR 76. TUF. (Cu –Un) 77. CROSSING (Cu –Vein 78. EWING
79. ORI
80. RICO
81. KERR (Mo,Cu — Ppy)
82. LEIS
83. MEYERS (Coal)
84. LONELY (Cu — Ppy)
85. CAR (Sb – Vein)
86. ROWLINSON (Sb – Vein)
87. KOOK BEAVON SAM McCABE RINK (Coal)

GOULTER (Au, Ag —Vein)

GIANT (Cu, Au – Un)

BLUFF (Cu — Vein)

RUSK (Cu, Mo, Ag, Au – Vein) 93. GOULTER 94. GIANT (0 95. BLUFF (96. RUSK (0 97. BOYLEN 98. HLAVAY (Coal) 99. RAND 100. PITTS (Au — Vein) 101. PANTHER (Au — Vein) 102. LUMBY 103. WHITE ROSE 104 THRASHER 105. MERIDIAN (Ag, Pb, Zn - Vein) 106. HAPPY (Au - Vein) 107 NUCLEUS (Au-Ppy) 108 TOOT (Cu - Un) 109 BOW 110 ROW STIKINIA(W) III ANTONIUK (Au-Ppy) 112 WHALE (Au-Vein) 113 FIELD 114 TATLMAIN COAL ELIC #157 SEPTITO 115 TOAST 116 DORWARD TESLIN EL 117 DIC (Ag-Vein) IIB JONAH Rowlinson 119 DOWS (Au-Vein) 120 ELEPHANT 121 STODDART "Tectonic Assembly of the Canadian Cordillera DT-upper triassic lower Jurassic basic volcanics, perphyry, and sediments KTO Upper Cretaceous intermediates - Felsic Volcania 136°00′ Aishihik Lake 115 H Whitehorse 110 m flows, tuffs "non mavine ACCURACY OF LOCATION 115 I le sub aerial o REFERENCE EKQ-Cretaceous intrusives CARMACKS CLASSIFICATION OF DEPOSITS Turassic intrusives SCALE 1:250,000 20 Miles YUKON MINFILE These classifications are discussed at the beginning of the metals inde 115 I REVISED TO APRIL, 1990 Carmacks = 110 miles NNW of Whitehouse

